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10/680,050	10/07/2003	Ralph O. Doughty	IVCC:1001RCE	6731

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EXAMINER	
POLTORAK, PIOTR	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/680,050	**Applicant(s)** DOUGHTY ET AL.
	Examiner PETER POLTORAK	**Art Unit** 2134

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 October 2007*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3,5-37,39-41,43-52,54-56,58-63,65 and 67-92* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1,3,5-37,39-41,43-52,54-56,58-63 and 65, 67-92* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *10/31/07 and 2/08/08*.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The IDS received on 10/31/07 and 2/08/08 have been entered.
2. In light of applicant's amendments received on 10/02/07 the objections cited in the previous (Final) Office Action are withdrawn.

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

Response to Arguments

Applicant arguments have been carefully considered.

4. *Applicant essentially argues that the art of record does not teach a control circuit disposed within the substrate that is connected to the one or more induction coils and operable to* ***generate a time-varying magnetic signal*** *via the one or more induction coils and the magnetic stripe".*

   The main premise for this allegation appears to be presented in applicant argument directed towards Krause's teaching (USPUB 20010011684). Although applicant notes that Krause discloses that the magnetic stripe of normal credit cards generates a spatially varying magnetic field, applicant argues that Krause does not disclose time-varying magnetic signal.

   The examiner points to Kelsey's (col. 6 lines 41-47 and in col. 8 lines 6-8, for example), who teaches as follows:

   > "The transducer 36 of FIG. 1, FIG. 4a, and FIG. 4b, contains a magnetic coil 40 surrounding a ferrite core 38 within the laminate card, and is located over the magnetic stripe 32. The transducer when activated can focus a magnetic field over a portion of magnetic stripe 32, thus

> activating the card to be read by existing card reading systems… the sales clerk draws the transaction card through an existing card reading system and is provided with cardholder name, and account numbers along with transaction access code 4134 and corresponding transaction approval code P5."

Magnetic signal (magnetic field induced data) communicated to a reader inherently involves time (is a function of time); thus, Kelsey's disclosure clearly teaches "a control circuit disposed within the substrate that is connected to the one or more induction coils and operable to *generate a time-varying magnetic signal* via the one or more induction coils and the magnetic stripe".

Additionally, applicant is reminded that the use of such a language as "operable" is not a positive recitation. The examiner acknowledges that use of such a language only requires that an apparatus have the capability to perform a particular function not that it actually performs it and, as a result, the limitation using such a term requires nominal consideration.

5. Claims 1,3,5-37,39-41,43-52,54-56,58-63, 65 and 67-92 have been examined.

Claim Objections

6. Claim 1 appears to be missing "is" in the phrase: "…wherein the magnetic field generator normally inactive".

Appropriate correction is required.

Claim Rejections - 35 USC § 103

7. Claims 1, 3, 5, 9, 11, 14-20, 21-26, 27, 28, 29-30, 31, 32-35, 36, 37, 39-41, 43, 44, 46, 47-50, 51, 52, 54-56, 58-61, 62-63, 65, 67, 71, 73, 76-83, 84-86, 88-92 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Kelsey (U.S. Patent No. 5907142) in view of Shen (U.S. Patent No. 6547130).

   As per claims 1, 18, 21, 28, 31, 46, 60-61, 80-81 and 83 Kelsey discloses a semi-flexible apparatus comprising a processor communicably coupled to the magnetic field generator (transducer, 36) disposed within a substrate that is normally inactive and electrically connected to a power source (Kelsey, Fig. 1 and 4A).

   The magnetic field generator comprises a magnetic stripe either mounted on the substrate or disposed within the substrate, one or more induction coils disposed with the substrate underneath of the magnetic stripe (Fig. 4a and 4b, and col. 6 lines 41-47). In addition to the fact that smart cards comprise one or more induction coils and a magnetic stripe that generate time-varying magnetic signal (e.g. USPN 6172609 and AN678), Kelsey discloses a control circuit disposed within the substrate that is connected to the one or more induction coils and operable to generate time-varying magnetic signal via the one or more induction coils and the magnetic stripe (Kelsey, col. 6 lines 32-47 and col. 8 lines 6-8, for example).

8. Although Kelsey does not disclose that the one or more induction coils are a length of the magnetic stripe the examiner points out that substrates with induction coils that are length of the magnetic stripe would have been and obvious variation well known in the art (e.g. USPub. 20010011684), and would not affect the functionality

of the invention. Thus, implementing an induction coil that is length of the magnetic stripe would simply be an obvious matter of design choice.

9. Kelsey does not disclose a memory and a biometric sensor communicably connected to the processor enabling the processor to process biometric information received from the biometric sensor to verify that a user is authorized to the apparatus and to activate the magnetic field generator when the user is verified. Shen's apparatus comprise biometric sensor communicably connected to the processor enabling the processor to process biometric information received from the biometric sensor to verify that a user is authorized to the apparatus and to activate and provide binary data to the magnetic field generator when the user is verified (Shen, Fig. 1, col. 1 lines 22-49 and col. 2 lines 3- col. 3 line 5).

   It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include a biometric sensor communicably connected to the processor enabling the processor to process biometric information received from the biometric sensor to verify that a user is authorized to the apparatus and to activate and provide binary data to the magnetic field generator as disclosed by Shen. One of ordinary skill in the art would have been motivated to perform such a modification in order to reduce the risks involved when the apparatus is stolen or misplace, and which enhances convenience and security when making network transactions (col.1 lines 22-26).

10. As per claims 3, 42 and 65, Kelsey a magnetic stripe either mounted on the substrate or disposed within the substrate, one or more induction coils disposed

within the substrate underneath the magnetic stripe, and a controller disposed within the substrate that is connected to the one or more induction coils and operable to generate a spatially varying or time-varying magnetic signal via the one ore more induction coils for emulating data obtained from swiping a magnetic stripe card through a magnetic card reader (e.g. Kelsey, Fig. 2, col. 6 lines 32-54).

11. As per claims 17, 19-20, 59, 61, 79 and 82 the magnetic stripe connected to the one or more induction coils provides contactless interface enabling wireless (no wire connection between the communicating devices) communication. Furthermore, since the disclosed communication implements sending and/or receiving electromagnetic waves therefore the device inherently uses an antenna.
12. As per claims 9 and 71 the power source in Kelsey in view of Shen's invention is selected from the group consisting of a battery, a piezoelectric generator, a solar panel, an electromagnetic energy converter; a kinetic energy converter and combination thereof (e.g. object 16, Kelsey fig. 1 or object 15, Shen Fig. 1)
13. As per claim 11, 73 the biometric disclosed by Kelsey in view of Shen is selected from the group consisting of a fingerprint sensor, retina sensor, iris sensor or voice sensor (object 12, Shen Fig. 1).
14. As per claims 14-16 and 76-78 Kelsey in view of Shen disclose a user interface selected from the group consisting of a touch pad, one or more button, a display and a voice sensor that is communicable coupled to the processor and electrically connected to the power source Kelsey discloses such user interfaces (e.g. objects 22, 30 and 44, Kelsey, Fig. 1 col. 3 lines 20-23 etc.).

15. As per claims 22 and 84 Kelsey in view of Shen discloses that the substrate is integrated into a card selected from the group consisting of an access card, a credit card, a debit card, an identification card, a mini-card, a security card, a stored value card and vendor-specific card (e.g. Kelsey, col. 5 lines 20-21).
16. As per claims 26, 88 the processor and the memory disclosed by Kelsey in view of Shen are integrated into a single integrated circuit (Shen Abstract and Fig. 1).
17. As per claim 27, 89, memory in Kelsey in view of Shen's invention stores biometric analog (object 11 and col. 1 lines 41-49).
18. As per claims 32-36, 47-51 and 90 Kelsey in view of Shen discloses the information associated with the authenticated user enabling approval of the transaction and that the transaction is denied whenever the authentication data is not valid (Shen col. 2 line 61-col. 3 line 5), and it is clear that Kelsey in view of Shen apparatus is used in an access transaction, a control transaction, a financial transaction, a financial transaction, a commercial transaction or an identification transaction (Kelsey, col. 5 lines 49-57, Shen, col. 2 line 61-col. 3 line 5).
19. As per claims 41 and 56, Kelsey in view of Shen disclose the step of selecting the information to enable the transaction (e.g. Kelsey, col. 7 lines 21-54).
20. As per claims 37 and 52 Kelsey in view of Shen discloses comparing the authentication data to one or more biometric templates (fingerprint reference data) stored on the device (Shen, col. 1 lines 41-45).
21. As per claim 43 and 58 Kelsey in view of Shen discloses the step of displaying information to the user (e.g. Shen, col. 3 lines 56-62).

22. As per claims 44 and 59 Kelsey in view of Shen discloses wireless communication, wherein the step of transmitting the information associated with the user (e.g. Shen, col.3 lines 56-62).

23. As per claim 62-63, Kelsey in view of Shen discloses a database (Shen, col. 7 lines 19-34) and one or more remote computer communicably coupled to the system processor via a network (e.g. Shen, col. 3 lines 56-62).

24. As per claims 5, 67, the magnetic signal in Kelsey in view of Shen's apparatus includes binary data describing a user name, user number (Kelsey, col. 5 lines 57-59) but is silent in regard to an expiration date.

    However, using an expiration date is well known in the art (e.g. Newkirk, U.S. Patent No. 4439636) and it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include the expiration date into binary data. One of ordinary skill in the art would have been motivated to perform such a modification in order to ensure that the apparatus (card) is active.

25. Furthermore, the examiner points out that the differences (no expiration date) between the pending application and Kelsey in view of Shen is only found in the nonfunctional descriptive material and are not functionally involved in the steps as currently recited in claim limitations. The operation of Kelsey in view of Shen's apparatus would be performed the same regardless whether the data include an expiration date. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, see In re Gulack, 703 F.2d 1381,

1385, 217 USPQ 401, 404 (Fed. Cir. 1983); In re Lowry, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include an expiration date because such data does not functionally relate to the steps method performed by the apparatus and because the subjective interpretation of the data does not patentably distinguish the claimed invention.

26. Similarly, as per claims 23-25, 85-87, a travel credential, a personal communication device or a personal device are non functional and thus the operation of Kelsey in view of Shen's substrate would be performed the same regardless whether the substrate was implemented into a travel credential selected from the group consisting of a passport, an immigration card and a visa, a personal communication device selected from a group consisting of a personal data assistant, a telecommunications device, a pager, a computer and an electronic mail transceiver and into a personal device/belonging selected from a group consisting of a watch, a jewelry, a key ring, a tag and eye glasses.

27. As per claims 29-30, 39-40, 54-55 and 91-92, Kelsey in view of Shen do not explicitly discloses deactivating the magnetic field generator after the magnetic field generator has been active for a specified period of time or when the authorized user is no longer detected.

Official Notice is taken that it is old and well-known practice to activate devices for a specified time or until authorized user is no longer detected (e.g. expiring a computer sessions after a specified time of inactivity by a user). It would have been obvious to one of ordinary skill in the art at the time of applicant’s invention to deactivate the magnetic field generator after the magnetic field generator has been active for a specified period of time given the benefit of security and resource saving.

28. Claims 23 and 85 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over Kelsey (U.S. Patent No. 5907142) in view of Shen (U.S. Patent No. 6547130) and further in view of Lewis (U.S. Pub. No. 20020194476).

The limitations of claim 23 have been addressed above.

Furthermore, the examiner points to Lewis who discloses an apparatus integrated into a travel credential selected from the group consisting of a passport, an immigration card and a visa (Lewis, [22]).

It would have been obvious to one of ordinary skill in the art at the time of applicant’s invention to integrate Shen’s apparatus into a travel credential as disclosed by Lewis. One of ordinary skill in the art would have been motivated to perform such a modification in order to prevent copying or altering of the travel credential.

29. Claims 24 and 86 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over Kelsey (U.S. Patent No. 5907142) in view of Shen (U.S. Patent No. 6547130) and further in view of Ausems (U.S. Patent No. 6434403).

The limitations of claim 24 have been addressed above.

Furthermore, the examiner points to Ausems who discloses a substrate integrated into a personal communication device selected from a group consisting of a personal data assistant a telecommunications device, a pager, a computer and an electronic mail transceiver (Ausems, Fig. 1f).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate the substrate disclosed by Shen's into a personal data assistant as disclosed by Ausems's . One of ordinary skill in the art would have been motivated to perform such a modification in order to provide security features preventing unauthorized use of the device.

30. Claims 25 and 87 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over Kelsey (U.S. Patent No. 5907142) in view of Shen (U.S. Patent No. 6547130) and further in view of Berney (U.S. Pub. No. 20030046228).

The limitations of claim 25 have been addressed above.

Furthermore, the examiner points to Berney who discloses a substrate integrated into a personal device/belonging selected from a group consisting of a watch, a jewelry, a key ring, a tag and eye glasses (Berney, Fig. 1 and 2).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement Shen's invention into a personal device as disclosed by Berney. One of ordinary skill in the art would have been motivated to perform such a modification in order to provide easy to use and carry form factor.

31. Claims 6 and 68 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over Kelsey (U.S. Patent No. 5907142) in view of Shen (U.S. Patent No. 6547130) and further in view of Harrson (U.S. Patent No. 5168275).

Kelsey in view of Shen disclose a magnetic stripe.

32. Kelsey in view of Shen do not disclose that the magnetic stripe contains three-tracks and each track contains a set of magnetic data cells.

    Harrson discloses that the magnetic stripe contains three-tracks and each track contains a set of magnetic data cells (Harrson, col. 7 lines 28-61).

    It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to accommodate the magnetic stripe contains three-tracks and each track contains a set of magnetic data cells as disclosed by Harrson. One of ordinary skill in the art would have been motivated to perform such a modification in order to extend Kelsey in view of Shen's invention to ANSI X4.16-1983, 3554 or later ISO standard magnetic stripes.

33. Claims 7 and 69 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over Kelsey (U.S. Patent No. 5907142) in view of Shen (U.S. Patent No. 6547130) and further in view of Izzo (U.S. Patent No. 6169929).

    Kelsey in view of Shen discloses an apparatus comprising a processor as discussed above.

34. Kelsey in view of Shen is silent in regard to the processor comprising an ASIC chip in addition to a smart card processor.

    Izzo discloses including ASIC chip in addition to a processor (Izzo, col. 4 lines 50-53). Also, an ordinary skilled artisan would recognize that ASIC is an Application Specific Integrated Circuit and it would have been obvious to one of ordinary skill in the art at the time of applicant's invention additionally include an ASIC chip as disclosed by Izzo given the benefit of specialized functionalities and increased speed.

35. Claims 12-13 and 74-75 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over Kelsey (U.S. Patent No. 5907142) in view of Shen (U.S. Patent No. 6547130) and further in view of Kamiya (U.S. Patent No. 5040223).

    Kelsey in view of Shen discloses an apparatus with a biometric (fingerprint) sensor as discussed above.

36. Kelsey in view of Shen does not disclose the details of gathering fingertip patterns in particular does not explicitly teach that the biometric sensor comprises a matrix of points operable to detect high and low points corresponding to ridges and valleys of the fingerprint and an emitter projecting light that is reflected from the user's finger onto the detector.

    Kamiya teach the biometric sensor that comprises a matrix of points operable to detect high and low points corresponding to ridges and valleys of the fingerprint and an emitter projecting light that is reflected from the user's finger onto the detector (Kamiya, Fig. 1, col. 4 lines 8-15 and col. 5 lines 20-33).

    It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate a matrix of points operable to detect high and low points corresponding to ridges and valleys of the fingerprint and an emitter projecting light that is reflected from the user's finger onto the detector as taught by Kamiya's invention into Kelsey in view of Shen's invention. One of ordinary skill in the art would have been motivated to perform such a modification in order to achieve a high overall fingerprint detection rate.

37. Claims 17, 19-20, 44, 59, 61, 79 and 82 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over Kelsey (U.S. Patent No. 5907142) in view of Shen (U.S. Patent No. 6547130) and further in view of Keaney (U.S. Patent No. 7046746). Kelsey in view of Shen disclose an apparatus with the an output interface that is selected from the group consisting of an antenna mounted on the substrate for wireless communication and an optical transmitte for wireless as discussed above.

38. Even if Kelsey in view of Shen did not explicitly disclose an output interface that is selected from the group consisting of an antenna mounted on the substrate for wireless communication and an optical transmitter, Keanye discloses an apparatus comprising an output interface is selected from the group consisting of an antenna mounted on the substrate for wireless communication and an optical transmitter (Keanye, Fig. 2 and col. 5 lines 8-14).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to implement an output interface selected from the group consisting of an antenna mounted on the substrate for wireless communication and an optical transmitter as taught by Keanye. One of ordinary skill in the art would have been motivated to perform such a modification in order to enable RF communication.

39. Claims 17, 19-20, 42, 44-45, 59, 61, 79 and 82 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over Kelsey (U.S. Patent No. 5907142) in view of Shen (U.S. Patent No. 6547130) and further in view of Kisner (W. Kinsner, "Smart Cards",

Department of Electrical & Computer Engineering University of Manitoba, October, 1999).

As per claim 42, Kelsey in view of Shen disclose the step of receiving authentication data and a swiping magnetic stripe card for data exchange between the card and another device (e.g. reader), as discussed above.

40. Kelsey in view of Shen do not disclose that the step of receiving the authentication data by the card (that is obtained from swiping a magnetic stripe card).

41. Kisner discloses receiving the authentication data by a card ("Horizontal standards", Kisner pg. 4).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include a step of the card receiving the authentication data as taught by Kisner. One of ordinary skill in the art would have been motivated to perform such a modification in order to provide handshaking protocol.

42. Lastly, as per claims 44-45, 59, 61, 79 and 82, Kelsey in view of Shen disclose an apparatus with the an output interface that is selected from the group consisting of an antenna mounted on the substrate for wireless communication and an optical transmitte for wireless as discussed above.

Even if Kelsey in view of Shen did not explicitly disclose an output interface that is selected from the group consisting of an antenna mounted on the substrate for wireless communication and an optical transmitter, Kisner discloses an apparatus comprising an output interface is selected from the group consisting of an antenna mounted on the substrate for wireless communication and an optical transmitter (Kisner, contactless smart cards, “Interface Types of Chip Cards” section, pg. 3). It would have been obvious to one of ordinary skill in the art at the time of applicant’s invention to include the circuitry that can produce varying magnetic field that effects the variation of the magnetic field as disclosed by Kisner into Kesley in view of Shen’s invention . One of ordinary skill in the art would have been motivated to perform such a modification in order to prevent slowing down lines.

43. Furthermore, although Kelsey in view of Shen do not disclose receiving power from an external power source in a contactless manner and converting the power received from the external power source into power compatible with the apparatus, Kinser disclose such as implementation (“Contactless smart cards”, Kinser pg. 3). Given the fact that it is old and well-known that batteries have finite life time it would have been obvious to one of ordinary skill in the art at the time of applicant’s invention to include the contactless power supply as taught by Kisner in order not limit the card to the battery life time.

44. Claims 8, 10, 24, 70 and 72 and 82 remain rejected under 35 U.S.C. 103 (a) as being unpatentable over Kelsey (U.S. Patent No. 5907142) in view of Shen (U.S. Patent No. 6547130) and further in view of Fox (U.S. Patent No. 5943624) and Thűringer (U.S. Patent No. 6507130).
Kelsey in view of Shen discloses the apparatus comprising a power source including a battery, as discussed above.

45. Kelsey in view of Shen do not disclose that the power source comprises a power generator, a converter electrically connected to a power generator and operable to convert power received from the power generator into power usable by the apparatus and there is no indication that Kelsey in view of Shen is implemented in a personal communication device selected from a group consisting of a personal data assistant, a telecommunications device, a pager, a computer and an electronic mail transceiver

Fox discloses a power generator and a converter electrically connected to a power generator and operable to convert power received from the power generator into power usable by the apparatus (Fox, Fig. 3 and col. 3 lines 35-59).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include a power generator and a converter electrically connected to a power generator and operable to convert power received from the power generator into power usable by the apparatus as disclosed by Fox. One of ordinary skill in the art would have been motivated to perform such a modification in order to provide the battery support.

Also, it would have been obvious to one of ordinary skill in the art at the time of applicant's invention to incorporate Kelsey in view of Shen's invention as discussed above into Fox apparatus. One of ordinary skill in the art would have been motivated to perform such a modification in order to provide capability of authenticating the user of the Fox apparatus.

46. Kelsey in view of Shen and Fox do not disclose a battery management unit connected to the battery and a power multiplexer connected to the battery management unit and the converter and operable to determine whether to draw power from the battery management unit, form the converter or both.

Thűringer teach an apparatus with the power circuit that includes a battery management unit for managing a battery and a power multiplexer operable to determine whether to draw power from the battery management unit, from the converter, or from both (Thűringer, objects 5-6 and 9, Fig. 2).

It would have been obvious to one of ordinary skill in the art at the time of applicant's invention to include a battery management unit for managing a battery and a power multiplexer in the power circuit operable to determine whether to draw power from the battery management unit, from the converter, or from both as taught by Thűringer into Kelsey in view of Shen in view of Fox invention. One of ordinary skill in the art would have been motivated to perform such a modification in order to prevent security attacks.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter Poltorak whose telephone number is (571) 272-3840. The examiner can normally be reached Monday through Thursday from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kambiz Zand can be reached on (571) 272-3811. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Peter Poltorak/

Examiner, Art Unit 2134

/Kambiz Zand/

Supervisory Patent Examiner, Art Unit 2134